Split Core Hall Effect DC Current Sensor CYHCT-EKFV

This Hall Effect current sensor is based on open loop principle and designed with high galvanic isolation between primary conductor and secondary circuit. It can be used for measurement of DC current etc. The output of the transducer reflects the real wave of the current carrying conductor.

Product Characteristics	Applications
• Excellent accuracy • Very good linearity • Less power consumption • Split core window structure • Electrically isolating the output of the transducer from the current carrying conductor • No insertion loss • Current overload capability	• Photovoltaic equipment • Frequency conversion timing equipment • Various power supply • Uninterruptible power supplies (UPS) • Electric welding machines • Electrolyzing and electroplating equipment • Electric powered locomotive • Electric power network monitoring

Technical Data

Primary Nominal DC Current I_r (A)	Primary Current Measuring Range I_p(A)	Output Voltage (V)	Part number
300A	0 ~ ± 300A	x=0: 0-4V ±1.0% x=3: 0-5V ±1.0% x=8: 0-10V ±1.0% (For 0-10V output the power supply must be 15VDC or 24VDC) x=S: Special output	CYHCT-EKFV-U/B300A-xn
400A	0 ~ ± 400A		CYHCT-EKFV-U/B400A-xn
500A	0 ~ ± 500A		CYHCT-EKFV-U/B500A-xn
600A	0 ~ ± 600A		CYHCT-EKFV-U/B600A-xn
800A	0 ~ ± 800A		CYHCT-EKFV-U/B800A-xn
1000A	0 ~ ± 1000A		CYHCT-EKFV-U/B1000A-xn
2000A	0 ~ ± 2000A		CYHCT-EKFV-U/B2000A-xn
4000A	0 ~ ± 4000A		CYHCT-EKFV-U/B4000A-xn
6000A	0 ~ ± 6000A		CYHCT-EKFV-U/B6000A-xn

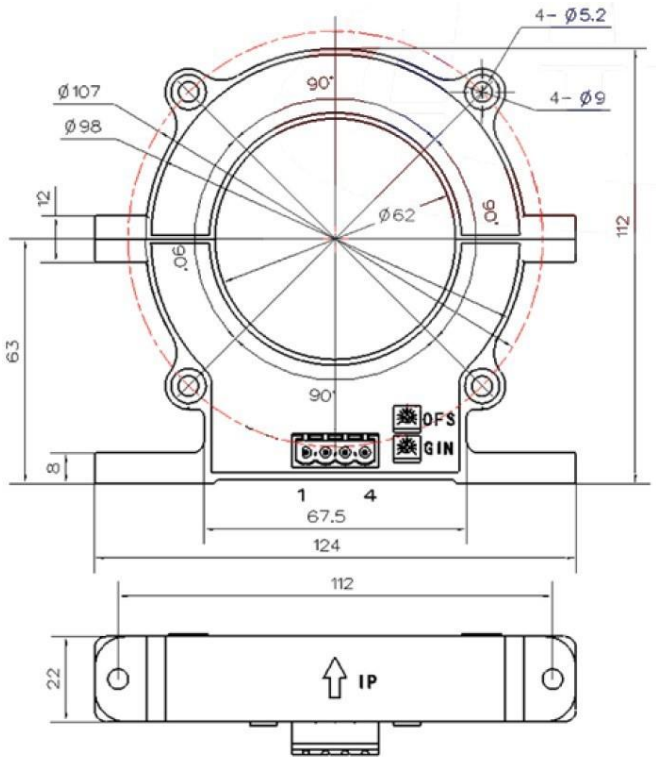
(n=2, *Vcc*= +12VDC; n=3, *Vcc* =+15VDC; n=4, *Vcc* =+24VDC; n=5, *Vcc* =±12VDC; n=6, *Vcc* =±15VDC; n=7, *Vcc* =±24VDC; U: unidirectional, B: bidirectional)

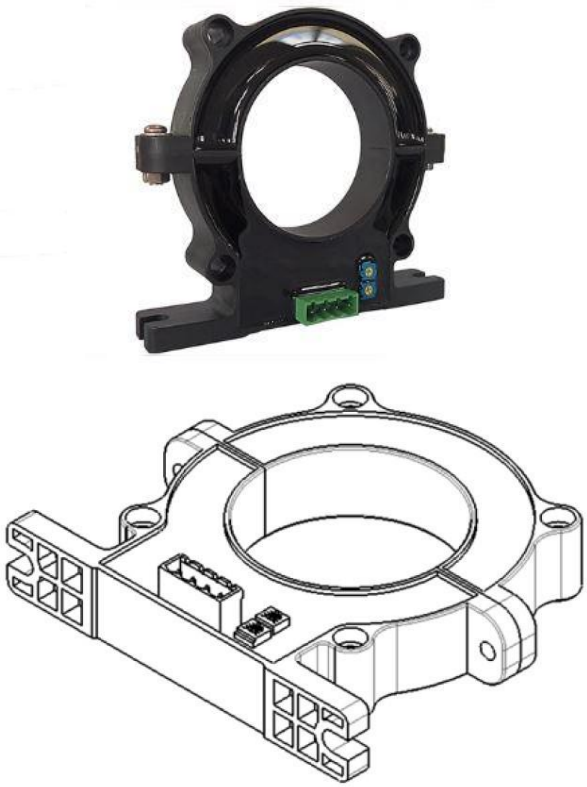
Supply Voltage:	V_{cc}=+12V, +15V, +24V, ±12V, ±15VDC ± 5%
Current Consumption (Vc=±15VDC):	I_c < 25mA
Isolation Voltage	5kV, 50/60Hz, 1min
Load Resistor:	R_L > 10kΩ
Accuracy at I_r, T_A=25°C (without offset),	X <1.0%
Linearity from 0 to I_r, T_A=25°C,	E_L <1.0% FS
Linear Measuring range,	1.2 times of measuring range
Overload capability,	3 times of measuring range
Electric Offset Voltage, T_A=25°C,	V_{oe} <±25mV
Magnetic Offset Voltage (I_r →0)	V_{om} <±25mV
Thermal Drift of Offset Voltage,	V_{ot} <±1.0mV/°C
Response Time at 90% of I_P (f=1k Hz)	t_r < 1ms
Frequency Bandwidth (-3dB),	f_b = DC-3kHz
Ambient Operating Temperature:	T_A =-25°C ~ +85°C
Ambient Storage Temperature:	T_S =-40°C ~ +100°C
Unit Weight:	500g/pc
Standard:	Q/320115QHKJ01-2016

Markt Schwabener Str. 8
D-85464 Finsing
Germany

Tel.: +49 (0)8121 – 2574100
Fax: +49 (0)8121– 2574101
Email: info@cy-sensors.com
http://www.cy-sensors.com

PIN Definition and Dimensions





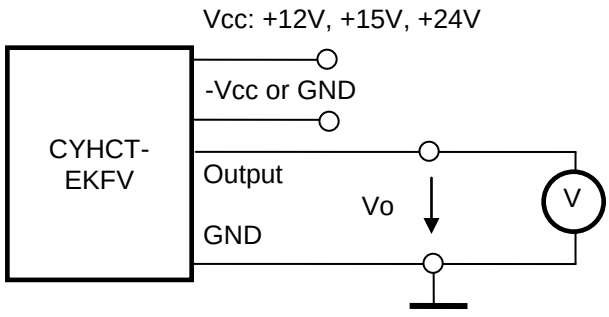
OFS: Offset Adjustment GIN: Gain Adjustment

Pin arrangement of connector:

1:	Vcc	2:	-Vcc or GND
3:	OUTPUT	4:	0V (GND)

Cable connection:

Red:	Vcc
Blue:	-Vcc or GND
Yellow:	OUTPUT
Black:	0V (GND)



Notes:

1. Connect the terminals of power source, output respectively and correctly, never make wrong connection.
2. Two potentiometers can be adjusted, only if necessary, by turning slowly to the required accuracy with a small screwdriver.
3. The best accuracy can be achieved when the window is fully filled with current carrying conductor.
4. The in-phase output can be obtained when the current direction of current carrying conductor is the same as the direction of arrow marked on the transducer

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